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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,414

04/07/2005

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EXAMINER

LISTVOYB, GREGORY

ART UNIT

PAPER NUMBER

1711

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/530,414	Applicant(s) ISHIWATA ET AL	
	Examiner Gregory Listvoyb	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/26/2005</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

Claims 1-2 and 4-15 rejected under 35 U.S.C. 102(b) as being anticipated by Uhara et al (WO02/16475), herein Uhara.

Regarding Claims 1, 2, 5 and 14-15 Uhara discloses a polyamide film, manufactured from polyamic acid comprising pyromellitic dianhydride, 10-60% mol of 1,4 phenylenediamine and 40-90% mol of 3,4'-oxydianiline (page 4, line 30, Example 1), which can be used in metal wiring circuit board, LOC and TAB tapes (page 1, line 15).

Regarding Claims 4, 6 and 7, since the structures of Uhara's and Applicant's polyimide are identical, Uhara's resin inherently possesses tensile strength of 150Mpa or greater, imide group concentration between 5.7 and 6.2 eq/kg and imide group fraction 95% or greater (Tables 1-3).

Regarding Claim 8, 9, 10 and 13 Uhara's polyamide meet the limitations of equations (1) and (2) (Tables 1-3). Polyamic solution from the above components converted to a gel polyisomide with acetic anhydride as a dehydrating agent (page 11, line 15 and page 12, line 5) with biaxially stretching (page 12, line 25) and following heating at 200-500C (page 12, line 30). Alternatively, the obtained partially imidized film can be immersed into isoimidating solution ((page 11, line 15).

In reference to Claim 11, Uhara teaches two steps for solvent removal and imidization. In the first step (corresponding to Application's step 2), only low temperature applied in order to prevent film blistering. In examiner's opinion, at this stage only small part of polyamic acid converts to polyamide.

Regarding claim 12, since swelling ratio derives from a polymer structure and solvent, Uhara's polyamide inherently has a swelling degree of 200-10000%.

Claims 1, 3 and 10 rejected under 35 U.S.C. 102(b) as being anticipated by Moriyama et al (JP publication 2001-081213), herein Moriyama.

Regarding Claims 1 and 3 Moriyama discloses a polyamide film, manufactured from polyamic acid comprising pyromellitic dianhydride, 60-90% mol of 1,4 phenylene diamine and 10-40% mol of another diamine, such as dioxy triphenyl diamine (abstract and line 0017).

In reference to claim 10, Moriyama teaches a method for film formation, where a partially cured polyamic acid dipped into a beta-picoline/acetic anhydride solution (line 0036).

Double Patenting

Claims 1-2, 4-5, 9 and 12 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 4, 5 and 18-19 of copending Application No. 10/543813. Although the conflicting claims are not identical, they are not patentably distinct from each other because a polyimide, disclosed in claim 1 of Application examined can be used as adhesive sheet and a laminate disclosed in claims 4, 5 and 18-19 of Application No. 10/543813. The above articles are made from a polyimide of the same structure as described in Application examined. Moreover, the primary application of the polyimide is a polymer film (see claims 2-8 of the examined Application).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory Listvoyb whose telephone number is (571) 272-6105. The examiner can normally be reached on 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1711

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gregory Listvoyb
Examiner
Art Unit 1711



James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700